

The opinion in support of the decision being entered today  
(1) was not written for publication in a law journal and  
(2) is not binding precedent of the Board.

Paper No. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte DAVID T. HOGE, WILLIAM C. DODT and JOHN C. OWENS

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Appeal No. 1997-3079  
Application No. 08/377,450

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ON BRIEF

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**MAILED**

**OCT 10 2000**

**PAT. & T.M. OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Before THOMAS, KRASS, and GROSS, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1, 3-5, 7-9, 11 and 12, all of the pending claims.

An oral hearing, set for October 11, 2000, was waived by appellants in a paper filed August 18, 2000 [Paper No. 25]. Accordingly, this decision was made on brief.

The invention is directed to a helical scan transport for a single reel tape cartridge which enables much more storage capacity in the same amount of physical space.

Representative independent claim 1 is reproduced as follows:

1. A helical scan transport apparatus for reading and writing data on to a magnetic recording tape which is wound on a supply reel rotatably mounted within a removable tape cartridge, wherein the tape has a leader block attached to one end for use in withdrawing the end from the tape cartridge, the transport comprising:

a chassis having a front end portion and a rear end portion;

an elevator assembly mounted on said chassis at said front end, said elevator assembly configured to receive the tape cartridge and to position the tape cartridge in a loaded position;

a take-up reel assembly coupled to said chassis at said rear end portion;

a helical deck mounted on a central portion of said chassis between said elevator assembly and said take-up reel assembly, said helical deck including a rotary read/write head, a substantially linear tape loading path between said elevator assembly and said take-up reel assembly, and a movable guide for seizing the tape from said tape loading path and for at least partially wrapping the tape around said rotary head; and

a raised linear threading mechanism, including a linear bearing, a threading arm, and a threading cam,

wherein said bearing, said arm, and said cam are operably configured to grasp the leader block of the tape, thread the tape through said tape loading path of said helical deck, and couple said leader block to said take-up reel assembly.

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The examiner relies on the following references:

Moy et al. (Moy)	4,928,245	May 22, 1990
Shimizu et al. (Shimizu)	4,991,037	Feb. 05, 1991
Godsoe et al. (Godsoe)	4,399,959	Aug. 23, 1983

Additionally, the examiner relies on admitted prior art [APA], disclosed at page 8, lines 18-27 of the instant specification.

Claims 1, 3-5, 7-9, 11 and 12 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner relies on Shimizu, Godsoe and APA with regard to claims 1, 3, 4, 9, 11 and 12, adding Moy to this combination with regard to claims 5, 7 and 8.

Reference is made to the briefs and answer for the respective positions of appellants and the examiner.

#### OPINION

We reverse.

The examiner has applied a combination of Shimizu, Godsoe and APA in rejecting independent claims 1 and 9, adding Moy to reject independent claim 5. However, the basis of the rejections rests on the obviousness of providing the tape loading system of Shimizu with the linear tape threading system taught by Godsoe, i.e., substituting Godsoe's linear tape threading system for Shimizu's tape threading system in the tape loading system of Shimizu.

Appellants argue, convincingly, in our view, that such a substitution would not have been obvious to the skilled artisan because to do so would destroy the intended functions of the references. That is, Shimizu is directed to the use of a single power source for performing various functions such as moving the elevator assembly, engaging and threading the leader block from the tape cartridge to the take-up reel and ejecting the cartridge from the elevator housing. The operation of Shimizu is dependent on the interaction of various mechanical cams and levers.

Godsoe is concerned with using a constant force spring, or a negator spring, for threading a tape in a single cartridge system. Because Godsoe does not rely on an outside power source for the threading operation, relying on the spring instead, the tape threading path from the tape cartridge to the take-up reel must be substantially linear. The spring cannot move the tape around all the capstans and rollers of the relatively complex tape threading path of Shimizu.

Accordingly, it does not appear reasonable to us that the artisan would have been led to employ the tape threading mechanism of Godsoe in the system of Shimizu. Unless one were to employ Godsoe's spring in the system of Shimizu, there would appear to be no reason to make the tape threading path in Shimizu linear. If one were

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to make the path in Shimizu linear because one wished to use the spring threading mechanism disclosed by Godsoe, it would appear that the spring would be insufficient in Shimizu to perform all of the intended functions of the single power source in Shimizu.

While the examiner suggests, at pages 7-8 of the answer, that the artisan would have kept the motor of Shimizu to perform all of the functions but for tape threading and would have used the spring threading mechanism of Godsoe in Shimizu for the tape threading function, we are at a loss to determine what evidence the examiner relies on to suggest that the artisan would have been led to pick and choose only so much of each disclosure of Shimizu and Godsoe so as to result in the instant claimed subject matter.

The examiner also argues that the substitution of the threading system of Godsoe into the system of Shimizu would have been obvious because they are "art recognized equivalent threading systems" [answer-page 5]. However, appellants challenge this assertion [see the reply brief] and the examiner has failed to come forward with any evidence that the two tape threading systems are, in fact, "art recognized equivalents."

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Appellants contend that it is the "form factor" which defines the invention [principal brief-page 13] and that this "form factor" is defined in the claims by the recitation of a helical transport including a take-up reel, an elevator assembly and a helical deck arranged in a substantially linear configuration on a chassis. Appellants further contend [principal brief-page 14] that the "prior art has provided no suggestion to use a substantially linear tape threading path with a helical deck and a single reel cartridge" and we have seen no evidence provided by the examiner to contradict this position.

Accordingly, we will not sustain the rejection of claims 1, 3-5, 7-9, 11 and 12 under 35 U.S.C. § 103 because the examiner has not, in our view, established a prima facie case of obviousness. APA and/or Moy fail to provide for the deficiency of the Shimizu/Godsoe combination, noted supra. We note that we need not consider the submitted declaration purporting to provide objective evidence of commercial success because, again, in our view, the examiner has not even established a prima facie case of obviousness.

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The examiner's decision rejecting 1, 3-5, 7-9, 11 and 12 under 35 U.S.C. § 103  
is reversed.

REVERSED

  
JAMES D. THOMAS )  
Administrative Patent Judge )

  
ERROL A. KRASS )  
Administrative Patent Judge )

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ANITA PELLMAN GROSS )  
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